REMARKS/ARGUMENTS

Claims 1-10 and 12-49 are pending in the present application. Support for new claim 49 can be found in the specification on pages 1-2. Reconsideration of the claims is respectfully requested.

I. Interview Summary

On August 2, 2006, the Examiner and the undersigned attorney discussed claim 1, *Jeddeloh*, *Okuyama*, and the rejection of claim 1. No agreement was reached.

II. 35 U.S.C. § 103, Asserted Obviousness

II.A. Claims 1-5, 10-21, 26-37, and 42-48

The Examiner rejected claims 1-5, 10-21, 26-37, and 42-48 under 35 U.S.C. §103 as obvious over *Jeddeloh*, System and Method for Remapping Defective Memory Locations, U.S. Patent 6,052,798 (April 18, 2000) (hereinafter "*Jeddeloh*") in view of *Okuyama*, et al., Disk Apparatus and Information Processing System, U.S. Patent Application Publication 2002/0126408 (September 12, 2002) (hereinafter "*Okuyama*"). With respect to claim 11, this rejection is moot as claim 11 has been canceled. With respect to the other claims in this rejection, this rejection is respectfully traversed.

Applicants first address the rejection of claim 1. Regarding claim 1, the Examiner states that:

> **With respect to claims I, 17, and 33**, *Jeddeloh* discloses a computer Program/method in a data processing system including a storage drive for verifying a condition of said storage drive's media, comprising:
>
> **A)** ***step 64, a memory access request is received from a memory requester, such as the system processor,***
>
> **B)** in response to a receipt of said command, attempting, by said storage drive, to read each one of a plurality of logical block addresses included in said storage drive ***(the memory access request to include an indication of whether a read or a write is being requested together with an address of the requested memory portion of the memory block);*** and
>
> **C)** verifying said condition of said media by determining, by said storage drive, ones of said plurality of logical block addresses that are not in a readable condition ***(step 66 determines whether the requested memory portion of the memory block is defective) [See steps 64 and 66, Fig. 3; Col. 5, Lines 51-61].***
>
> Although such a command is embedded with the read/write command which verify whether a block of the storage device from which to read is readable and to which to write is writable, *Jeddeloh* fails to specifically teach receiving within said storage drive a command to verify said condition of said storage drive's media. However, *Okuyama* teaches disk apparatus and information processing system, magnetic disk apparatus to include a requesting unit for requesting the

> magnetic disk apparatus to re-set a value of specification information capable of determining performance of the magnetic disk apparatus, the magnetic disk apparatus comprising a re-setting unit to request the CPU to issue a set feature command in order to set the performance parameter of the information recording/reproducing unit 23 [Fig. 14; 204, Fig. 8; Par. 0062, 0056, 0070], said recording/reproducing apparatus setting the drive to a writable/readable state [306-311, Fig. 14]. Therefore, it would have been obvious to one of ordinary skill in the art as with each read or write, the condition of the storage device is verified along with the read or the write. One of ordinary skill in the art would have obviously combine the two references because both are in the same field and a command to verify said condition of said storage drive's media would have provided the addition of a flag/state identifying readable/writable block of the disk apparatus and as well as a flag/state identifying unreadable/unwritable block of the disk apparatus.

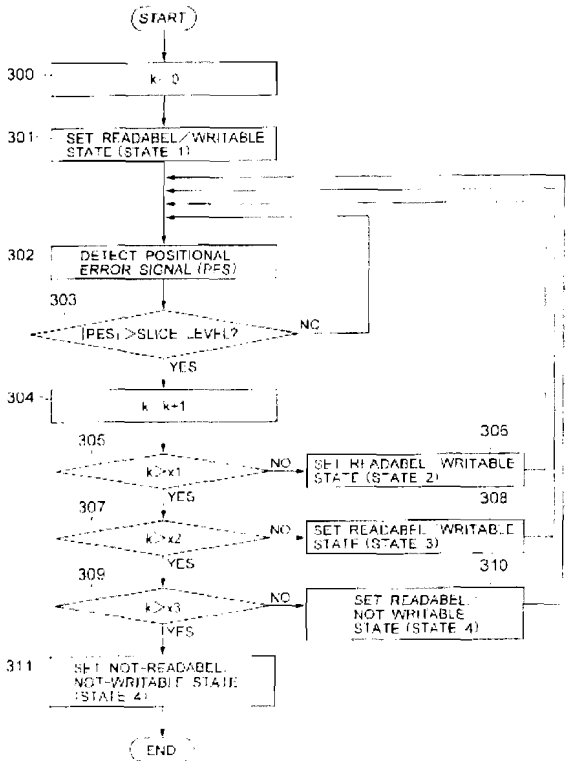
Office Action dated May 4, 2006, pp. 2-4 (emphasis in original).

If the Patent Office does not produce a *prima facie* case of unpatentability, then without more the applicant is entitled to grant of a patent. *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Grabiak*, 769 F.2d 729, 733, 226 U.S.P.Q. 870, 873 (Fed. Cir. 1985). A *prima facie* case of obviousness is established when the teachings of the prior art itself suggest the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1993). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In the case at hand, the Examiner has failed to state a *prima facie* obviousness rejection because all limitations of the claimed invention have not been properly considered.

Specifically, the Examiner has failed to state a *prima facie* obviousness rejection because the proposed combination does not teach all of the features of claim 1. The Examiner admits, and Applicants agree, that *Jeddeloh* does not teach the claimed feature of, "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1. Furthermore, for the reasons presented in the previous response to office action, *Jeddeloh* does not suggest this claimed feature. Additionally, *Okuyama* does not teach or suggest this claimed feature. The Examiner asserts otherwise, citing from various portions of *Okuyama*. Applicants address each citation in turn.

The Examiner first refers to figure 14 of *Okuyama*. Figure 14 is reproduced below:

FIG. 14



Nothing in figure 14 teaches or suggests, "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1. Figure 14 does establish whether a read or writable state is set, but not whether a command has been received to "*verify said condition of said storage drive's media*," as recited in claim 1. Moreover, nothing in figure 14 could be reasonably interpreted as teaching this claimed feature.

Furthermore, nothing in the text describing figure 14 teaches or suggests this claimed feature. For example, *Okuyama* states that:

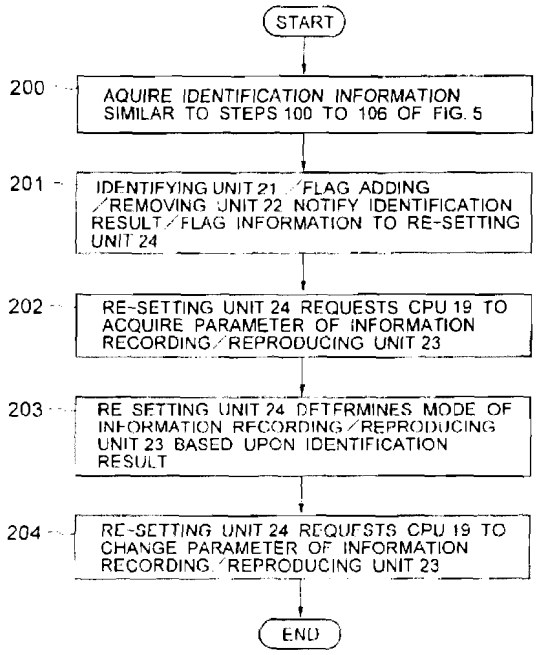
> [0074] Referring now to a flow chart of FIG. 14, a description will be made of an example of a detecting process operation as to whether or not data read/write operation is available. The detecting unit 25 counts a frequency degree at which the positional error signal exceeds a predetermined slice level, and then detects the following states in accordance with an increase in the count value, namely from a state under which both the read and write operations can be carried out, another state under which only the read operation can be done but the write operation cannot be done, and also another state under which both the read and write operations cannot be carried out. In view of the data protection, at such a time instant when only the data read operation is available but the data write operation is not available, the data is preferably backed up by another magnetic disk apparatus.

Okuyama, paragraph 0074.

The cited paragraph and subsequent paragraphs describe a method of determining the level of *error protection* for the disk drive, not the *condition of the media*, as recited in claim 1. Specifically, *Okuyama* provides for a method of detecting whether or not read or write operations are *available* on a magnetic disk. Later, *Okuyama* states "*in view of the data protection...*" Thus, one of ordinary skill is instantly aware that *Okuyama* is concerned with whether the disk has been *specifically set* to an error protection status, such as "read only." This feature described in *Okuyama* has nothing to do with determining the condition of the media itself, as recited in claim 1. Therefore, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1.

Nevertheless, the Examiner also cites figure 8 of *Okuyama* as teaching this claimed feature. Again, the Examiner is incorrect. Figure 8 of *Okuyama* is as follows:

FIG. 8



Nothing in figure 8 teaches or suggests, "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1. Figure 8 does teach a method of resetting a hard drive, but not whether a command has been received to "*verify said condition of said storage drive's media*," as recited in claim 1. Moreover, nothing in figure 8 could be reasonably interpreted as teaching this claimed feature.

Furthermore, nothing in the text describing figure 8 teaches or suggests this claimed feature. For example, *Okuyama* states that:

> [0062] Referring now to a flow chart of FIG. 8, a sequential process operation of resetting operations will be explained. Just after the apparatus is initiated, after the apparatus is reset, and just after the external electronic appliance is mounted, either the identification information or the identification information of the flag information is acquired at the steps 100 to 500 of FIG. 5 (step 200). Just after the identification information has been acquired, both the identifying unit 21 and the flag adding/removing unit 22 notify the identification information to the re-setting unit 24 (step 201). The re-setting unit 24 which receives the identification information requests the CPU 19 to issue an Identify Device command in order to read out a performance parameter of the magnetic disk apparatus 23 (step 202). With respect to this Identify Device command defined by the ATA standard, both such information capable of indicating as to whether or not the information recording/reproducing unit 23 owns a re-setting function of the performance parameter, and a bit indicative of information as to each of the performance parameters are provided in, for example, either the bender unique region or the reserve region. After the information recording/reproducing unit 23 confirms that the Identify Device command is issued, this information recording/reproducing unit 23 transmits such a response issued in accordance with the standard of the Identify Device command to the CPU 19, into which the information of the respective performance parameters is added, and such information for indicating as to whether or not the own device can reset the performance parameter is added. As a result, the performance parameters of the information recording/reproducing unit 23 can read. The read performance parameters may be preferably stored in the memory 20.

Okuyama, paragraph 0062.

The cited paragraph teaches a method of resetting a magnetic disk. Most of the cited paragraph is dedicated to describing the identification of the magnetic disk. Ultimately, the "performance parameters" of the "recording/reproducing unit 23" can be read and stored. This feature described in *Okuyama* has nothing to do with determining the condition of the media itself, as recited in claim 1. Therefore, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1.

The Examiner also cited paragraph 0062 as teaching this claimed feature. However, as shown above, paragraph 0062 has nothing to do with the claimed invention.

Nevertheless, the Examiner also cites the following portion of *Okuyama* as teaching this claimed feature:

> [0056] Alternatively, the identification information by the CPU 19 may be acquired from the CPU 14 by utilizing the ATA standard, or other methods (step 105). As an example of the ATA standard, the CPU 19 issues a Set Feature command so as to transmit/receive the identification information between the CPU 14 and the own CPU 19 by employing the data bus. With respect to this Set Feature command defined by the ATA standard, a bit indicative of a commencement of transmitting/receiving the identification information is provided in either the vender unique region or the reserve region. While the CPU 14 monitors the issuing operation of the Set Feature command and the bit

> indicative of starting of the transmission/reception of the identification information, when the bit is equal to "1", this CPU 14 sends the identification information to the CPU 19. As one of the alternative methods, for example, while the data bus is used, the CPU 19 may write a predetermined value into the data bus. On the other hand, while the CPU 14 monitors the data bus, when the CPU 14 confirms that the predetermined value is written into the data bus, this CPU 14 may transmit the identification information to the CPU 19.

Okuyama, paragraph 0056.

The cited paragraph describes a method of acquiring "identification information" of the magnetic disk. The cited paragraph specifically describes the "ATA standard" for acquiring the identification information. This feature described in *Okuyama* has nothing to do with determining the condition of the media itself, as recited in claim 1. Therefore, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1.

Nevertheless, the Examiner also cites the following portion of *Okuyama* as teaching this claimed feature:

> [0070] When the operation mode of the information recording/reproducing unit 23 is determined based upon the identification information, the re-setting unit 24 requests the CPU 19 to issue a Set Feature command in order to set the performance parameter of the information recording/reproducing unit 23 (step 204). With respect to this Set Feature command defined by the ATA standard, such an instruction capable of setting the performance parameter of the information recording/reproducing unit 23 is provided in, for example, the vender unique region, or the reserve region.

Okuyama, paragraph 0070.

The cited paragraph provides that once the identification information has been determined, the "resetting unit" requests the CPU to set the "performance parameter" of the "information recording/reproducing unit," which is the magnetic disk. The cited paragraph also describes where the set feature command is provided. This feature described in *Okuyama* has nothing to do with determining the condition of the media itself, as recited in claim 1. Therefore, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1.

Overall, *Okuyama* provides for a method of detecting an "internal condition" of the magnetic disk. However, the term "internal condition" has nothing to do with the actual physical condition of the media itself, as claimed. For example, *Okuyama* states the following:

> [0083] As previously described in detail, a plurality of external electronic appliances can be identified, which are mounted on the magnetic disk apparatus. Also, the disk apparatus can be driven in the optimum manner in accordance with a plurality of external electronic appliances mounted on this disk apparatus.

> Furthermore, since the data back-up timing, the replace timing of the apparatus, and the disk remaining capacity can be notified to the user, the user friendly magnetic disk apparatus can be provided and also reliability of the data protection can be improved. In addition, even when no power supply voltage is applied from the external electronic appliance, even such an information processing system itself can detect the ***internal conditions*** of the magnetic disk apparatus, ***which involve the attribute of the data written in the magnetic disk apparatus***, and can notify the detected internal condition to the user, while this information processing system is driven by the battery.

Okuyama, paragraph 0083 (emphasis supplied).

Okuyama specifically provides that the internal conditions of the magnetic disk involve the attributes of the *data* written on the magnetic disk apparatus, not the condition of the media itself as recited in claim 1. Although *Okuyama* describes "internal conditions" in several other places in the document, *Okuyama* does not elsewhere define the term "internal conditions." In light of the above paragraph and in further light of the description of the term "internal conditions," one of ordinary skill can readily ascertain that *Okuyama* does not verify the condition of the media, as claimed, but rather is interested in dealing with the data stored on the media. Therefore, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1.

As shown above, *Okuyama* does not teach or suggest the claimed feature of "receiving within said storage drive a command to verify said condition of said storage drive's media," as recited in claim 1. Because *Okuyama* is completely devoid of disclosure regarding this claimed feature, nothing in *Okuyama* suggests this claimed feature. As admitted by the Examiner, *Jeddeloh* does not teach this claimed feature. Additionally, as shown in the previous response to office action, *Jeddeloh* does not suggest this claimed feature. For this reason, the proposed combination of *Jeddeloh* and *Okuyama*, when considered as a whole, does not teach this claimed feature. Accordingly, the proposed combination, when considered as a whole, does not teach all of the features of claim 1. Thus, the Examiner has failed to state a *prima facie* obviousness rejection of claim 1.

In addition, one of ordinary skill would not combine the references to achieve the invention of claim 1 because no motivation exists to combine the references. No motivation exists because the references are directed towards solving different problems. It is necessary to consider the reality of the circumstances--in other words, common sense--in deciding in which fields a person of ordinary skill would reasonably be expected to look for a solution to the problem facing the inventor. *In re Oetiker*, 977 F.2d 1443 (Fed. Cir. 1992); *In re Wood*, 599 F.2d 1032, 1036, 202 U.S.P.Q. 171, 174 (CCPA 1979). In the case at hand, the cited references address distinct problems. Thus, no common sense reason exists to establish that one of ordinary skill would reasonably be expected to look for a solution to the problem

facing the inventor. Accordingly, no teaching, suggestion, or motivation exists to combine the references and the Examiner has failed to state a *prima facie* obviousness rejection of claim 1.

For example, *Jeddeloh* is directed to solving the problem of enabling defective volatile memory chips via error correction schemes. *Jeddeloh* provides that:

> One way to enable such defective memory chips to be incorporated into personal computers would be to employ error correction schemes to compensate for defective memory locations. Error correction schemes add to each data word plural error correction bits that enable the data word to be reconstituted in the event of an erroneous data bit within the data word. However, such prior art error correction schemes typically only reconstitute a data word if only a single bit of the data word is erroneous. Moreover, such error correction schemes add several extra data bits to each data word which results in high memory overhead. In addition, such error correction schemes could be extended to detect multiple erroneous data bits, but the memory overhead that would result likely would be unacceptable.

Jeddeloh, col. 1, l. 58 through col. 2, l. 5.

On the other hand, *Okuyama* is directed to the problem of maximizing the efficiency of a hard disk drive that may have varying levels of data protection. For example, *Okuyama* provides as follows:

> [0007] Furthermore, in such a disk apparatus which is accessed by a plurality of external electronic appliances, this disk apparatus owns such a function with respect to a command issued from each of these external electronic appliances. That is, this disk apparatus judges as to whether or not the received command can be executed within allowable time, and also notifies the judgement result to the external electronic appliance. Similar to a single set of external electronic appliance, this disk apparatus is not always operated in the optimum condition in the system.

Okuyama, paragraph 0007.

Based on the plain disclosures of the references themselves, the references address completely distinct problems that are unrelated to each other. The problem of enabling defective *volatile* memory chips via error correction schemes is completely distinct from the problem of maximizing the efficiency of a hard disk drive that may have varying levels of data protection. Because the references address completely distinct problems, one of ordinary skill would have no reason to combine or otherwise modify the references to achieve the claimed invention. Thus, one of ordinary skill in the art would not combine these references to achieve the invention of claim 1 because no teaching, suggestion, or motivation exists to combine the references in the manner suggested by the Examiner. Accordingly, the Examiner has failed to state a *prima facie* obviousness rejection against claim 1.

In addition, the Examiner has failed to state a *prima facie* obviousness rejection because the Examiner has failed to state a proper teaching, suggestion, or motivation to combine the references. With regard to a teaching, suggestion, or motivation to combine the references, the Examiner states that:

> One of ordinary skill in the art would have obviously combine the two references because both are in the same field and a command to verify said condition of said storage drive's media would have provided the addition of a flag/state identifying readable/writable block of the disk apparatus and as well as a flag/state identifying unreadable/unwritable block of the disk apparatus.

Office Action dated May 4, 2006, p. 4.

However, the addition of a flag/state as described in *Okuyama* has nothing to do with issuing a command to verify the condition of the media itself, as claimed in claim 1. Instead, the addition of a flag/state only identifies the *error protection* status of *data* on the magnetic disk, as shown above in the numerous quotations from *Okuyama*. Thus, the Examiner's statement is irrelevant to claim 1. Accordingly, the Examiner's statement can not serve as a proper teaching, suggestion, or motivation to combine the references to achieve the invention of claim 1. For this reason, the Examiner has again failed to state a *prima facie* obviousness rejection of claim 1.

Claims 17 and 33 contain features similar to those presented in claim 1. Therefore, the Examiner has failed to state a *prima facie* obviousness rejection with respect to these claims for the same reasons presented above. Claims 2-6, 10, 12-16, 18-21, 26-32, 34-37, and 42-48 depend from one of claims 1, 17, and 33. At least by virtue of their dependency on claims 1, 17, and 33, the Examiner has for similar reasons failed to state a *prima facie* obviousness rejection of claims 2-6, 10, 12-16, 18-21, 26-32, 34-37, and 42-48. Additionally, these claims contain other features not taught or suggested by the proposed combination of *Jeddeloh* and *Okuyama*. For example, the proposed combination does not teach "reassigning each one of said ones of plurality of logical block addresses that are not in a readable condition to a new logical block address," as recited in claim 2. The proposed combination does not teach or suggest the claimed step of "determining whether nonreadable logical block addresses are to be reassigned," as recited in claim 3. The Examiner's assertions to the contrary are manifestly incorrect, given the lack of disclosure in *Okuyama* in this regard.

Because the proposed combination of *Jeddeloh* and *Okuyama*, when considered as a whole, does not teach or suggest all of the features of claims 1-5, 10, 12-21, 26-37, and 42-48, the Examiner has failed to state a *prima facie* obviousness rejection of these claims. Accordingly, the rejection of these claims has been overcome.

II.B. Claims 6-9, 22-25, and 38-41

The Examiner rejects claims 6-9, 22-25, and 38-41 as obvious over *Jeddeloh* in view of *Okuyama* in view of *Reeve*, et al., Small Computer Systems Interface – Data Link Processor, U.S. Patent 4,864,532 (September 5, 1989). This rejection is respectfully traversed.

Regarding claim 6, the Examiner states that:

> **With respect to claims 6-8, 22-24, and 38-40**, the combination of *Jeddeloh* and *Okuyama* teaches the invention as claimed; *Jeddeloh* additionally discloses: the memory device being nonvolatile memory such as EEPROM or flash memory [Col. 3, Lines 6-10; Col. 3, Lines 41-45] the memory being coupled through memory and expansion bus (26, Fig. 2); but the combination fail to specifically teach coupling and decoupling itself from the host. However, *Reeve* discloses sequence of operations operated in the sequential handling of data transfer operations where disk drive reconnects and disconnects itself to/from to data link processor in the process of transferring data complete 110 cycled operations [Col. 12, Lines 4-31]. Therefore, it would have been obvious to one of ordinary skill in the art, that storage medium couples and decouples itself from the host, as taught by *Reeve*, in order to continue an operation which was previously started by the data link processor.

Office Action dated May 4, 2006, p. 7 (emphasis in original).

The Examiner has failed to state a *prima facie* obviousness rejection because the proposed combination does not teach all of the features of the claims. For example, the proposed combination of *Jeddeloh*, *Okuyama*, and *Reeve*, when considered as a whole, does not teach all of the features of claim 1. As shown above, the combination of *Jeddeloh* and *Okuyama* does not teach or suggest all of the features of claim 1. In addition, *Reeve* does not teach or suggest all of the features of claim 1.

As shown in the previous response to office action, *Reeve* teaches that during a data transfer, when the disk drive needs time to perform a task such as crossing a cylinder boundary, the disk drive disconnects, performs the task, and then reconnects to resume the data transfer. During the time the disk drive is disconnected, the data is transferred into a buffer memory. When the disk drive reconnects, the data transfer resumes from the buffer memory. The reason for performing these actions is to increase the data transfer rate between the host computer and the disk drives. See *Reeve*, Abstract.

However, neither the cited portion of *Reeve*, nor any other portion of *Reeve* teaches or suggests *verifying the condition of the media*, as recited in claim 1. Therefore, *Reeve* does not teach or suggest the features of claim 1, as asserted by the Examiner. In addition, *Reeve* does not elsewhere teach or suggest the claimed features, as asserted by the Examiner.

Because none of *Jeddeloh*, *Okuyama*, or *Reeve* teaches or suggests all of the features of claim 1, the Examiner has failed to state a *prima facie* obviousness rejection against claims 6-9 at least by virtue of their dependency on claim 1. For similar reasons, the Examiner has failed to state a *prima facie* obviousness rejection against claims 22-25 and 38-41.

In addition, no motivation exists to combine the references because one of ordinary skill would not combine the references as proposed by the Examiner. As shown above, *Jeddeloh* is directed to the problem of enabling defective *volatile* memory chips via error correction schemes. In contrast, *Okuyama* is directed to the problem of maximizing the efficiency of a hard disk drive that may have varying levels

of data protection. In still further contrast, *Reeve* is directed to the problem of delay before a requesting peripheral could be serviced by a host CPU. For example, *Reeve* states that:

> It has been characteristic of many prior I/O controllers that they could only execute one particular data transfer command cycle to completion before commencement of a second data transfer command cycle operation. In a busy system where multiple peripheral units demand attention from the host computer, there were often delay periods before a requesting peripheral unit could manage to get service of the host or where the host was delayed in accessing the I/O controller to execute data transfers to a selected peripheral unit. By reducing the time delays which prior systems involved, the present I/O controller, designated as the Small Computer System Interface--Data Link Processor, operates to minimize these time delays and increase throughput.

Reeve, col. 1, ll. 18-32.

The problem of enabling defective *volatile* memory chips via error correction schemes is entirely distinct from the problem of maximizing the efficiency of a hard disk drive that may have varying levels of data protection. Moreover, the problem of delays before a requesting peripheral could be serviced by a host CPU is entirely distinct from either the previous two problems. Because the references address completely distinct problems, one of ordinary skill would have no reason to combine or otherwise modify the references to achieve the claimed invention. Thus, one of ordinary skill in the art would not combine these references to achieve the invention of claim 6 because no teaching, suggestion, or motivation exists to combine the references in the manner suggested by the Examiner. Accordingly, the Examiner has failed to state a *prima facie* obviousness rejection against claim 6. For similar reasons, the Examiner has failed to state a *prima facie* obviousness rejection against claims 22-25 and 38-41.

The proposed combination of *Jeddeloh*, *Okuyama*, and *Reeve*, when considered as a whole, fails to teach all of the features of claims 6-9, 22-25, and 38-41. Additionally, these references all address different problems, so no motivation exists to combine the references. Thus, the Examiner has failed to state a *prima facie* obviousness rejection of these claims. Accordingly, the rejection of claims 6-9, 22-25, and 38-41 has been overcome.

II.C. Claims 10, 26, and 42

The Examiner rejects claims 10, 26, and 42 as obvious over *Jeddeloh* in view of *Okuyama* in view of *Russell*, Recovering and Relocating Unreliable Disk Sectors When Encountering Disk Drive Read Errors, U.S. Patent 6,332,204 (December 18, 2001). This rejection is respectfully traversed.

Regarding claim 10, the Examiner states that:

> With respect to claims 10, 26, and 42, the combination of *Jeddeloh* and *Okuyama* teaches the invention as claimed; *Jeddeloh* additionally discloses the use of an error table to reassign logical block addresses; but the combination fail to

> specifically teach determining block addresses that require error recovery procedures.
>
> However, *Russell* discloses determining logical block addresses that require error recovery procedures and reassigning block addresses that require error recovery procedures [abstract; Col. 2, Lines 22-26]. Therefore, it would have been obvious to one of ordinary skill in the art, to recover failing sectors because data within a failing sector could be recovered before the sector becomes completely unrecoverable, as taught by *Russell* [Col. 2, Lines 26-29].

Office Action dated May 4, 2006, p. 8.

The Examiner has failed to state a *prima facie* obviousness rejection because the proposed combination does not teach all of the features of the claims. For example, the proposed combination of *Jeddeloh*, *Okuyama*, and *Russell*, when considered as a whole, does not teach all of the features of claim 1. As shown above, the combination of *Jeddeloh* and *Okuyama* does not teach or suggest all of the features of claim 1. In addition, *Russell* does not teach or suggest all of the features of claim 1.

Russell teaches a peripheral controller that executes data transfer operations between a host computer and a multiple number of separate peripheral terminal units. A specialized buffer memory control system provides dedicated page-segments for each one of the peripheral terminal units to enable the peripheral controller to concurrently manage a multiple number of data transfer cycles in an optimum fashion in order to increase the through-put of the data transfer operations. See *Russell*, Abstract.

However, neither the cited portion of *Russell*, nor any other portion of *Russell* teaches or suggests receiving a command to *verify the condition of the media*, as recited in claim 1. Therefore, *Russell* does not teach or suggest the features of claim 1, as asserted by the Examiner. In addition, *Russell* does not elsewhere teach or suggest the claimed features, as asserted by the Examiner.

Because none of *Jeddeloh*, *Okuyama*, or *Russell* teaches or suggests all of the features of claim 1, the Examiner has failed to state a *prima facie* obviousness rejection against claim 10 at least by virtue of its dependency on claim 1. For similar reasons, the Examiner has failed to state a *prima facie* obviousness rejection against claims 26 and 42.

In addition, no motivation exists to combine the references because one of ordinary skill would not combine the references as proposed by the Examiner. As shown above, *Jeddeloh* is directed to the problem of enabling defective *volatile* memory chips via error correction schemes. In contrast, *Okuyama* is directed to the problem of maximizing the efficiency of a hard disk drive that may have varying levels of data protection. In still further contrast, *Russell* is directed to the problem of protecting data in an unstable sector upon detection of the unstable sector. For example, *Russell* states that:

> A sector for which reads must be retried multiple times is likely to be "failing," or in the process of becoming unrecoverable. Once a sector becomes unrecoverable, disk drives will normally perform relocation of the bad sector to a

> reserved replacement sector on the drive. However, sectors are generally relocated only after they have become unrecoverable, and typically a sector which may be successfully read is deemed good regardless of the number of attempts required to read the data. This may result in loss of data since the sector was not relocated prior to the sector becoming unrecoverable--that is, prior to the data becoming unreadable and therefore "lost."
>
> It would be desirable, therefore, to provide a mechanism for detecting and relocating failing or unreliable disk sectors prior to complete loss of data within the sector.

Russell, col. 1, ll. 53-67.

The problem of enabling defective *volatile* memory chips via error correction schemes is entirely distinct from the problem of maximizing the efficiency of a hard disk drive that may have varying levels of data protection. Moreover, the problem of protecting data in an unstable sector upon detection of the unstable sector is entirely distinct from either of the previous two problems. Because the references address completely distinct problems, one of ordinary skill would have no reason to combine or otherwise modify the references to achieve the claimed invention. Thus, one of ordinary skill in the art would not combine these references to achieve the invention of claim 10 because no teaching, suggestion, or motivation exists to combine the references in the manner suggested by the Examiner. Accordingly, the Examiner has failed to state a *prima facie* obviousness rejection against claim 10. For similar reasons, the Examiner has failed to state a *prima facie* obviousness rejection against claims 26 and 42.

The proposed combination of *Jeddeloh*, *Okuyama*, and *Russell*, when considered as a whole, fails to teach all of the features of claims 10, 26, and 42. Additionally, these references all address different problems, so no motivation exists to combine the references. Thus, the Examiner has failed to state a *prima facie* obviousness rejection of these claims. Accordingly, the rejection of claims 10, 26, and 42 has been overcome.

III. New Claim 49

Applicants have added new claim 49 to this application, which provides as follows:

> 49. (New) The method of claim 1 wherein the condition of said storage drive's media comprises a condition of the surface of the storage drive's media.

None of *Jeddeloh*, *Okuyama*, *Reeve*, or *Russell* teach or suggest the features of claim 1, or of the further feature that the storage drive's media comprises a condition of the surface of the storage drive's media, as recited in claim 49. Therefore, no *prima facie* obviousness rejection can be made against claim 49 using these references.

IV. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance. The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: August 3, 2006

Respectfully submitted,

/Theodore D. Fay III/

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